

What is claimed is:

1. An immunogenic composition capable of inducing a cytotoxic response *in vitro* or *in vivo* against a viral disease through a MHC-1 restricted exogenous antigen presentation pathway without requiring viral replication, containing at least one of the compounds:

(A) a first plasmid containing a polynucleotide corresponding to the entire or a part of the viral genome and a second plasmid comprising an insert containing a polynucleotide coding for a viral envelope (a part of the envelope or a surface protein) and being under the control of a promoter, said plasmids being selected for their fusogenic properties when binding to antigen presentation cells, and for inducing a cytotoxic response through a MHC-1 restricted exogenous antigen presentation pathway;

(B) a plasmid comprising a polynucleotide coding for the entire or a part of the virus genome and contains an insert containing a polynucleotide coding for a viral envelope (or a part of the envelope or a surface protein), and being under the control of a promoter said plasmid expressing viral particles being selected for their fusogenic non-replicative properties, and for inducing a cytotoxic response after a CMH-2 restricted exogenous antigen presentation pathway;

(C) a virus with intact fusogenic capacities, but whose infectious capacities have been inactivated or attenuated; and

(D) viral particles obtained by the purification of a cell culture supernatant.

2. An immunogenic composition according to claim 1 wherein the viral particles obtained by the purification of a cell culture supernatant are prepared by transfecting producing cells (for example, HeLa, 293) with the plasmids according to claim 1 and purifying the supernatant, or by infecting antigen presenting cells with an HIV virus, purifying the supernatant, and inactivating or attenuating the infectious capacity of the virus.

3. A vaccinating composition containing the immunogenic composition according to claim 2 in association with a pharmaceutically acceptable vehicle.

4. A vaccinating composition containing the immunogenic composition according to claim 2 in association with another vaccine.

5. A vaccinating composition containing the immunogenic composition according to claim 2 wherein the composition is obtained by the process of claim 16.

6. A process of treatment of a eukaryotic host suffering from a viral pathology comprising administering a plasmid comprising a polynucleotide coding for the entire or a part of the virus genome and containing an insert containing a polynucleotide coding for a viral envelope (or a part of the envelope or a surface protein), and being under the control of a promoter, said plasmid expressing viral particles being selected for its fusogenic, non-replicative properties, and for inducing a cytotoxic response after a CMH-1 restricted exogenous antigen presentation pathway.

7. A process of treatment of a eukaryotic host suffering from a viral pathology comprising coadministering a first plasmid comprising the entire or a part of the virus genome and a second plasmid comprising an insert containing a polynucleotide coding for a viral envelope (a part of the envelope or a surface

protein) and being under the control of a promoter, said plasmid being selected for its fusogenic properties, and for inducing a cytotoxic response after an exogenous antigen presentation which is MHC-1 restricted.

8. A process of treatment according to claim 6 or 7, wherein the virus is an human or animal retrovirus.

9. A process of treatment according to claim 6 or 7, wherein the virus is HIV-1, HIV-2, SIV, FeLV, or FIV.

10. A process of treatment according to claim 6 or 7, wherein that the host is a mammal.

11. A process of treatment according to claim 6 or 7, wherein the host is a mouse.

12. A process of stimulation *in vivo* of cytotoxic lymphocytes through an MHC-1 restricted exogenous antigen presentation pathway without requiring viral replication, comprising:

(A) administration of the plasmids contained in the immunogenic composition according to claims 1 or 2 to the host according to claim 10;

(B) optionally the cytotoxic T cells obtained after the step A above are tested in a cytotoxic test comprising:

(i) the incubation of an organ or a biologic fluid of the host containing cytotoxic T cells of the host with a synthetic peptide which sequence is encoded by a viral genome contained partly in the first or the second plasmid; or

(ii) the use of target cells with the same HLA haplotype as the host or a compatible HLA haplotype, said target cell being incubated with a synthetic peptide which sequence is a part of the sequence of an HIV-genome.

13. A process of stimulation *in vivo* of cytotoxic lymphocytes through an MHC-1 restricted exogenous antigen presentation pathway without requiring viral replication, comprising :

(A) administration of viral particles obtained by supernatant purification according to claim 2;

(B) optionally the cytotoxic T cells obtained after step A above are tested in a cytotoxic test comprising:

(i) the incubating of an organ or a biologic fluid of the host containing cytotoxic T cells of the host with a synthetic peptide which sequence is encoded by the genome contained partly in the first or the second plasmid; or

(ii) the use of target cells with the same HLA haplotype as the host or a compatible HLA haplotype, said target cells being incubated with a synthetic peptide which sequence is a part of an HIV genome.

14. A process of stimulation *in vivo* of cytotoxic lymphocytes by exogenous antigen presentation without viral replication comprising:

(A) administration of an HIV virus which infectious capacities have been inactivated or attenuated, but whose fusogenic capacities are intact according to claim 2;



membranes of the viral particles with the plasma membranes of the APCs, which is followed by MHC-I-restricted presentation of the antigen by the APCs without viral replication or de novo, *in situ* synthesis of the antigen in the APCs;

contacting the resulting transduced APCs with CTLs that recognize MHC-I-restricted antigen; and

determining cell cytotoxicity resulting from said contact.

18. The method as claimed in claim 17, wherein the antigen is an HIV-1 antigen and the viral particles are attenuated or inactivated HIV-1 viral particles.